

Serial No. 09/771,425

IN THE CLAIMS:

1. (Currently amended) A eukaryotic mammalian cell comprising:
a first recombinant gene encoding a chimeric receptor;
a second recombinant gene encoding a compound the expression of which creates an autocrine or anti-autocrine loop; and
a reporter system that is activated or inactivated upon the creation of said autocrine or anti-autocrine loop.
2. (Canceled).
3. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein the chimeric receptor is a multimeric or multimerizing receptor.
4. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein said second recombinant gene is functionally incorporated after a constitutive promoter.
5. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein said reporter system is activated as a result of a ligand binding to said chimeric receptor.
6. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein a cytoplasmic part of the chimeric receptor is a cytoplasmic part of at least one interferon receptor subunit.
7. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein the reporter system comprises *E. coli* xanthine-guanine phosphoribosyl transferase (gpt).
8. (Currently amended) The eukaryotic mammalian cell of claim 7, wherein said reporter system is placed under control of a 6-16 reporter.

Serial No. 09/771,425

9. (Currently amended) The eukaryotic mammalian cell of claim 4, wherein said second recombinant gene is inserted after an SRa or HEF1a promoter.

10. (Currently amended) The eukaryotic mammalian cell of claim 1, wherein the cell is a 2fTGH cell.

11. (Currently amended) A method of screening for a compound that inhibits the binding of a ligand with the extracellular part of a chimeric receptor and/or with inhibits the signaling pathway of the cytoplasmic part of a chimeric receptor, the method comprising: providing the eukaryotic mammalian cell of claim 1; contacting said eukaryotic mammalian cell with said compound and said ligand; and selecting cells in which the cell's reporter system is inactivated; thus screening for the compound that inhibits the binding of the ligand with the extracellular part of the chimeric receptor ~~or with~~ and/or inhibits the signaling pathway of the cytoplasmic part of the chimeric receptor.

12-13. Canceled.

14. (Currently amended) A kit, comprising a eukaryotic mammalian host cell and one or more transformation vectors, which upon the transfection of said cell with said vector or vectors, results in the eukaryotic mammalian cell of claim 1.

Serial No. 09/771,425

15. (Currently amended) A method of screening for ligands agonists of an orphan a chimeric receptor, the method comprising:
providing a eukaryotic mammalian cell comprising:
a first recombinant gene encoding a chimeric receptor;
a library of recombinant genes encoding at least one compound, the expression of which creates an autocrine loop;
a reporter system that is activated upon the creation of said autocrine loop;
selecting cells in which the cell's reporter system is activated; and
identifying the ligand corresponding to the at least one compound that binds to said chimeric receptor and activated said autocrine loop;
thus screening for the ligands agonists of an the orphan chimeric receptor.

16. (Currently amended) The method according to claim 24 wherein said ~~series of compounds comprise~~ ligand comprises a genes gene encoding said antagonists.

17. Canceled.

18. (Currently amended) The method according to claim 15, wherein said ligands agonists are produced by the autocrine loop.

19-20. Canceled.

21. (Currently amended) The eukaryotic mammalian cell of claim [[2]] 1, wherein the chimeric receptor is a multimeric or multimerizing receptor.

22. (Currently amended) The eukaryotic mammalian cell of claim [[2]] 1, wherein said second recombinant gene is functionally incorporated after a constitutive promoter.

Serial No. 09/771,425

23. (Currently amended) The ~~eukaryotic~~ mammalian cell of claim ~~[[2]]~~ 1, wherein said reporter system is activated as a result of a ligand binding to said chimeric receptor.

24. (Currently amended) A method of screening for antagonists inhibiting ~~ligand-receptor binding of a chimeric receptor, the method comprising:~~

providing a ~~eukaryotic~~ mammalian cell comprising:

a first recombinant gene encoding a chimeric receptor;

a second recombinant gene encoding a compound, the expression of which creates an autocrine loop;

a reporter system that is activated upon the creation of said autocrine loop;

~~reacting~~ ~~contacting a series of compounds~~ the compound with said chimeric receptor in the presence of a ligand of the chimeric receptor ~~eukaryotic cell~~;

~~assaying the inhibiting activity of the ligand-receptor binding of each element of said series of compounds by assaying~~ determining the ability of the compound to the deactivation of activate the reporter system; and

comparing the ability of the compound to activate the reporter system to a positive or a negative control; and

~~based on said~~ thereby identifying the deactivation, determining the presence of an antagonist of the chimeric receptor.

Serial No. 09/771,425

25. (Currently amended) A method of screening for antagonists inhibiting ligand-receptor binding of a chimeric receptor, the method comprising:

providing a eukaryotic mammalian cell comprising:

a first recombinant gene encoding a chimeric receptor;

a second recombinant gene encoding a compound, the expression of which creates an anti-autocrine loop;

a reporter system that is deactivated upon the creation of said anti-autocrine loop;

contacting the compound with said chimeric receptor in the presence of a ligand of the chimeric receptor;

assaying the inhibiting activity of the ligand-receptor binding by assaying the activation of the reporter system;

comparing the inhibiting activity of said series of compounds to a positive or a negative control;

and

determining the presence of an antagonist that creates said anti-autocrine loop by scoring the deactivation of the reporter.